

Work Order ID 138653 /

138653

BLUE

Page 1

Friday, November 06, 2015 11:38:26 AM

Item ID: D2939-1BL Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Saddle LH In, 206
 Start Date: 11/6/2015 Start Qty: 6.00 *6* Cust Item ID:
 Required Date: 11/20/2015 Req'd Qty: 6.00 *6* Customer:
 Reference:

Approvals: Process Plan: mf Date: 15-11-06 Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2939	Rev C

100	HAAS CNC VERTICAL MACHINING #1	0.01				6	Ø		DAS 20 9-89
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100

HAAS 3

HAAS CNC vertical machine #3

Memo

Program part number and batch number.
 1-Inspect part number and batch number are programmed correctly.
 2-Machine Step No 1 of Folio and visually inspect as per dwg D2939 & attached Dimension Sheet
 3-Machine Step No 2 of Folio and visually inspect as per

110	CONVENTIONAL MILLING MACHINE	0.00				6	Ø		DAS 20 9-89
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110

Mill Conv

Conventional Milling Machine

Memo

Machine Keyway and inspect per attached dimension sheet

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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**WORK ORDER NON-CONFORMANCE / UPDATE**

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Work Order update only ☐

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Misidentified ☐	Past Due ☐																								

Work Order ID 138653***138653***

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Friday, November 06, 2015 11:38:26 AM

Item ID: D2939-1BL Accept ***N900040100*** Setup Start ***NS1***
Revision ID:
Item Name: Saddle LH In, 206 Stop ***NS2***
Start Date: 11/6/2015 Start Qty: 6.00 ***6*** Cust Item ID:
Required Date: 11/20/2015 Req'd Qty: 6.00 ***6*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.01							
Quality Control									

_____ **DEC 01 2015**

SA 20151201

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
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Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

Picklist Print

Friday, November 06, 2015 11:38:25 AM

Page 1

Work Order ID: 138653

138653

Parent Item: D2939-1BL

*D2939-1BL *

Parent Item Name: Saddle LH In, 206

Start Date: 11/6/2015

Required Date: 11/20/2015

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP: B00.06.26New DWG rev (mpp 2069)EC
IPP Rev:C As per Rev C 07-03-19 JLM IPP REV:D 15.10.09
ADDED BL DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-001		Manufactured	No			100	Each	54.0000	1	6			
D6101-001									**	6		DAS 20 9-89	15-11-16
Saddle Billet													

Location	Loc Qty	Loc Code
MAT042	54	
132708	14	
135956	40	

(137 755)

6

DQA: _____ Date: _____

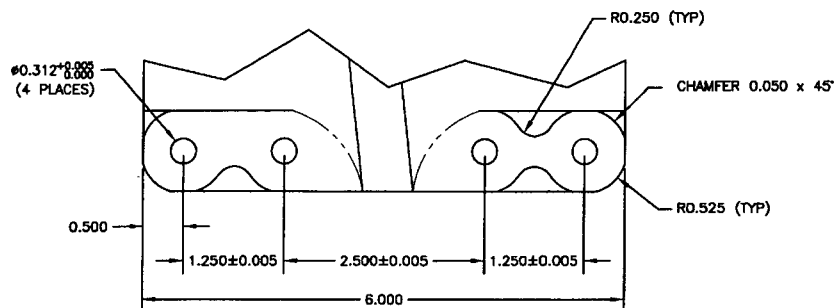


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				OTHER :							

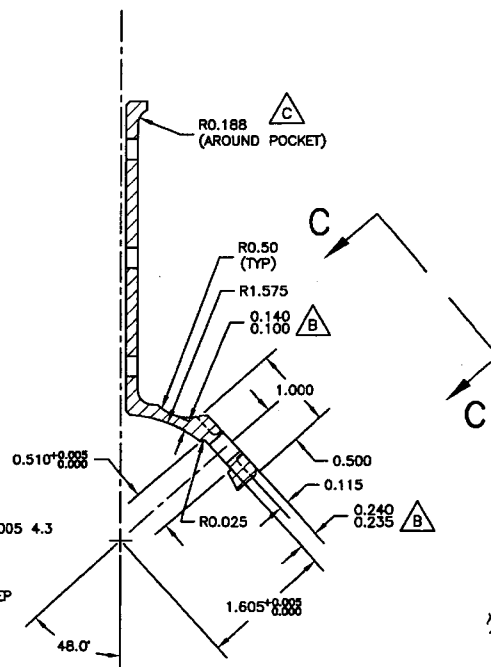


VIEW C-C

D2939-1 LH SADDLE (SHOWN)
D2939-2 RH SADDLE (OPPOSITE)

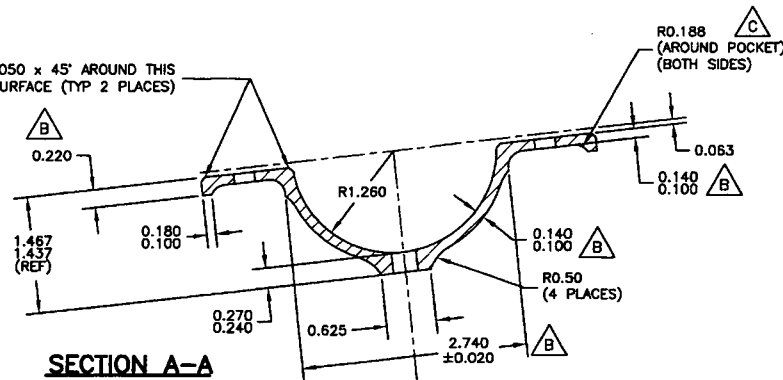
NOTES:

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)
(MAKE FROM D6101-001 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE INCHES
- 6) ENGRAVE PART AND BATCH NUMBER IN THIS AREA 0.010 TO 0.015 DEEP

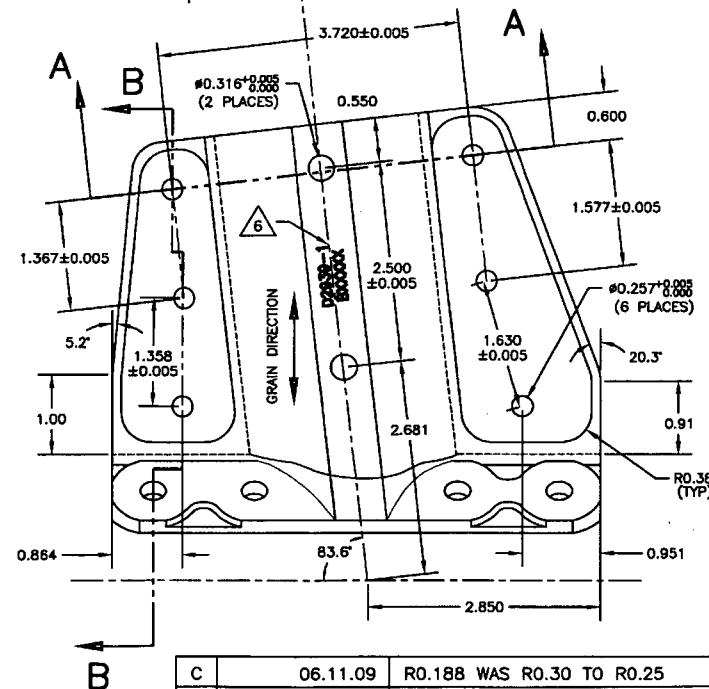


SECTION B-B

CHAMFER 0.050 x 45° AROUND THIS SURFACE (TYP 2 PLACES)



SECTION A-A



F138653

C	06.11.09	R0.188 WAS R0.30 TO R0.25
B	00.05.29	CHANGED DEOMETRY AND MATERIAL
A	99.11.12	NEW ISSUE
DESIGN	4	DRAWN BY CB
CHECKED	PH	APPROVED
DATE	06.11.09	TITLE SADDLE INSIDE
DART AEROSPACE USA, INC.		REV. C
D2939		SHEET 1 OF 1
SCALE		2:3

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DART AEROSPACE USA, INC.

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Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified	☐	Past Due	☐				

DART AEROSPACE LTD	Work Order:	138653
Description: 206 Saddle, Inboard, Left side	Part Number:	D2939-1
Inspection Dwg: D2939 Rev. C		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2939 Rev. C and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
A	0.100	0.140		.116	.118	.117	.116		
B	0.100	0.140		.119	.119	.119	.118		
C	0.100	0.140		.120	.120	.120	.120		
D	0.210	0.230		.224	.223	.224	.223		
E	1.245	1.255		1.250	1.250	1.250	1.250		
F	1.245	1.255		1.250	1.250	1.250	1.250		
G	2.495	2.505		2.500	2.500	2.500	2.500		
H	0.510	0.515		.512	.512	.512	.512		
I	1.572	1.582		1.577	1.577	1.577	1.577		
J	2.495	2.505		2.500	2.500	2.500	2.500		
K	0.257	0.262		.259	.259	.259	.259		
L	0.312	0.317		.314	.314	.314	.314		
M	0.235	0.240		.236	.236	.237	.236		
N	0.100	0.140		.121	.121	.122	.121		
O	0.540	0.560		.546	.546	.545	.546		
P	0.490	0.510		.496	.498	.497	.499		
Q	3.715	3.725		3.720	3.720	3.720	3.720		
R	2.720	2.760		2.740	2.740	2.740	2.740		
S	0.240	0.270		.250	.253	.253	.253		
T	0.100	0.180		.135	.135	.135	.135		
U	1.625	1.635		1.630	1.630	1.630	1.630		
V	1.362	1.372		1.367	1.367	1.367	1.367		
W	0.316	0.321		.316	.316	.316	.316		
X	1.250	1.270		1.260	1.261	1.2618	1.260		
Y	1.565	1.585	DT8695 A/B	1.5725	1.574	1.5747	1.5728		
Z	0.178	0.198		.188	.188	.188	.188		
AA									
AB									
AC									
AD									
AE									
AF									
AG									
AH									
Accept/Reject									

Measured by: <u>20</u>	Audited by: <u>44</u>
Date: <u>15-11-17</u>	Date: <u>15/11/25</u>

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Reformat; Added Dim. X-Y, DT8683, DT8686, DT8690 & DT8695 A/B	KJ/RF	
C	07.03.21	Revised per drawing revision C	KJ/JLM	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

DART AEROSPACE LTD	Work Order: 138653
Description: 206 Saddle, Inboard, Left side	Part Number: D2939-1
Inspection Dwg: D2939 Rev. C	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2939 Rev. C and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	5#	6#	8#	9#		
A	0.100	0.140		.117	.117				
B	0.100	0.140		.119	.118				
C	0.100	0.140		.121	.122				
D	0.210	0.230		.224	.223				
E	1.245	1.255		1.250	1.250				
F	1.245	1.255		1.250	1.250				
G	2.495	2.505		2.500	2.500				
H	0.510	0.515		.512	.512				
I	1.572	1.582		1.577	1.577				
J	2.495	2.505		2.500	2.500				
K	0.257	0.262		.259	.259				
L	0.312	0.317		.314	.314				
M	0.235	0.240		.235	.237				
N	0.100	0.140		.121	.120				
O	0.540	0.560		.546	.546				
P	0.490	0.510		.498	.494				
Q	3.715	3.725		3.720	3.720				
R	2.720	2.760		2.740	2.740				
S	0.240	0.270		.253	.253				
T	0.100	0.180		.135	.135				
U	1.625	1.635		1.630	1.630				
V	1.362	1.372		1.367	1.367				
W	0.316	0.321		.316	.316				
X	1.250	1.270		1.2617	1.260				
Y	1.565	1.585	DT8695 A/B	1.574	1.5725				
Z	0.178	0.198		.188	.188				
AA									
AB									
AC									
AD									
AE									
AF									
AG									
AH									

Accept/Reject

DAS
20
9-00

DAS
44
9-00

Measured by:	
Date:	15-11-18

Audited by:	
Date:	15/11/23

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Reformat; Added Dim. X-Y, DT8683, DT8686, DT8690 & DT8695 A/B	KJ/RF	
C	07.03.21	Revised per drawing revision C	KJ/JLM	



Part Number: D2939-1	Rev: C	- Page 1 -
Description: SADDLE INSIDE	Inspection Dwg: D2939	Work Order: B138653

Item Ref.	Nominal	Tolerance	No. Piece_1 Actual	No. Piece_2 Actual	No. Piece_3 Actual	No. Piece_4 Actual	
1	0.312	+0.005/0.000	0.313	0.313	0.313	0.313	
2	0.500	+0.010/-0.010	0.497	0.499	0.500	0.502	
3	1.250	+0.005/-0.005	1.250	1.250	1.250	1.250	
4	2.500	+0.005/-0.005	2.501	2.500	2.502	2.500	
5	1.250	+0.005/-0.005	1.249	1.249	1.248	1.250	
6	6.000	+0.010/-0.010	6.000	6.000	6.001	6.001	
D7	0.050	+0.010/-0.010	0.045	0.045	0.045	0.045	
D8	0.050	+0.010/-0.010	0.048	0.048	0.048	0.048	
9	1.452	+0.015/-0.015	1.454	1.453	1.454	1.453	
10	0.220	+0.010/-0.010	0.226	0.225	0.225	0.225	
D11	0.140	+0.040/-0.040	0.135	0.135	0.135	0.135	
D12	0.120	+0.020/-0.020	0.119	0.119	0.119	0.119	
13	1.260	+0.010/-0.010	1.258	1.258	1.258	1.258	
14	0.063	+0.010/-0.010	0.059	0.059	0.059	0.059	
15	0.120	+0.020/-0.020	0.122	0.122	0.122	0.122	
D16	0.120	+0.020/-0.020	0.116	0.118	0.117	0.117	
D17	2.740	+0.020/-0.020	2.740	2.740	2.740	2.740	
D18	0.625	+0.010/-0.010	0.635	0.635	0.635	0.635	
D19	0.255	+0.015/-0.015	0.250	0.253	0.253	0.253	
20	0.316	+0.005/0.000	0.316	0.316	0.316	0.316	
21	3.720	+0.005/-0.005	3.719	3.718	3.719	3.719	
22	0.550	+0.010/-0.010	0.549	0.550	0.549	0.550	
23	0.600	+0.010/-0.010	0.598	0.599	0.600	0.600	
24	1.577	+0.005/-0.005	1.578	1.578	1.577	1.579	
25	0.257	+0.005/0.000	0.258	0.258	0.258	0.258	
26	2.500	+0.005/-0.005	2.500	2.500	2.500	2.500	
27	1.630	+0.005/-0.005	1.631	1.630	1.631	1.630	
28	20.300	+0.500/-0.500	20.291	20.324	20.266	20.292	
29	0.951	+0.010/-0.010	0.952	0.952	0.952	0.951	
30	2.850	+0.010/-0.010	2.850	2.849	2.851	2.850	
31	2.681	+0.010/-0.010	2.683	2.682	2.682	2.681	

Measured by: GUILLAUME AUCLAIR	DAS 08 9-89
Date: 2015-11-18	

Audited by:	DAS 44 9-89
Date: 15/11/35	



Part Number: D2939-1	Rev: C	- Page 2 -
Description: SADDLE INSIDE	Inspection Dwg: D2939	Work Order: B138653

Item Ref.	Nominal	Tolerance	No. Piece_1 Actual	No. Piece_2 Actual	No. Piece_3 Actual	No. Piece_4 Actual	
32	83.600	+0.500/-0.500	83.577	83.574	83.574	83.575	
33	0.864	+0.010/-0.010	0.865	0.865	0.865	0.866	
34	1.358	+0.005/-0.005	1.359	1.359	1.359	1.358	
35	5.200	+0.500/-0.500	5.215	5.199	5.187	5.234	
36	1.367	+0.005/-0.005	1.368	1.368	1.367	1.368	
D37	0.188	+0.010/-0.010	0.188	0.188	0.188	0.188	
38	1.575	+0.010/-0.010	1.575	1.573	1.573	1.573	
D39	0.120	+0.020/-0.020	0.120	0.120	0.120	0.120	
D40	1.000	+0.010/-0.010	1.003	1.003	1.003	1.003	
41	0.500	+0.010/-0.010	0.502	0.503	0.503	0.503	
42	0.115	+0.010/-0.010	0.113	0.112	0.115	0.111	
D43	0.235	+0.005/0.000	0.236	0.236	0.237	0.237	
44	1.605	+0.005/0.000	1.607	1.606	1.605	1.605	
Ang45	48.000	+0.500/-0.500	47.950	47.972	47.967	47.912	
D46	0.510	+0.005/0.000	0.512	0.512	0.512	0.512	

Measured by: GUILLAUME AUCLAIR	DAS 08 9-89
Date: 2015-11-18	

Audited by:	DAS 44 9-89
Date: 15/11/25	



Part Number: D2939-1	Rev: C	- Page 3 -
Description: SADDLE INSIDE	Inspection Dwg: D2939	Work Order: B138653

Item Ref.	Nominal	Tolerance	No. Piece_5 Actual	No. Piece_6 Actual			
1	0.312	+0.005/0.000	0.313	0.313			
2	0.500	+0.010/-0.010	0.501	0.500			
3	1.250	+0.005/-0.005	1.250	1.251			
4	2.500	+0.005/-0.005	2.500	2.500			
5	1.250	+0.005/-0.005	1.250	1.250			
6	6.000	+0.010/-0.010	6.001	6.001			
07	0.050	+0.010/-0.010	0.045	0.045			
08	0.050	+0.010/-0.010	0.048	0.048			
9	1.452	+0.015/-0.015	1.453	1.453			
10	0.220	+0.010/-0.010	0.225	0.225			
D11	0.140	+0.040/-0.040	0.135	0.135			
D12	0.120	+0.020/-0.020	0.119	0.118			
13	1.260	+0.010/-0.010	1.257	1.258			
14	0.063	+0.010/-0.010	0.059	0.059			
15	0.120	+0.020/-0.020	0.122	0.121			
D16	0.120	+0.020/-0.020	0.117	0.117			
D17	2.740	+0.020/-0.020	2.740	2.740			
D18	0.625	+0.010/-0.010	0.635	0.635			
D19	0.255	+0.015/-0.015	0.253	0.253			
20	0.316	+0.005/0.000	6.316	0.316			
21	3.720	+0.005/-0.005	3.719	3.717			
22	0.550	+0.010/-0.010	0.550	0.549			
23	0.600	+0.010/-0.010	0.599	0.598			
24	1.577	+0.005/-0.005	1.578	1.578			
25	0.257	+0.005/0.000	0.258	0.258			
26	2.500	+0.005/-0.005	2.500	2.500			
27	1.630	+0.005/-0.005	1.630	1.630			
28	20.300	+0.500/-0.500	20.300	20.288			
29	0.951	+0.010/-0.010	0.953	0.952			
30	2.850	+0.010/-0.010	2.850	2.851			
31	2.681	+0.010/-0.010	2.681	2.682			

Measured by: GUILLAUME AUCLAIR	DAS 08 9-89
Date: 2015-11-18	

Audited by:	DAS 44 9-89
Date: 15/11/25	



Part Number: D2939-1	Rev: C	- Page 4
Description: SADDLE INSIDE	Inspection Dwg: D2939	Work Order: B138653

Item Ref.	Nominal	Tolerance	No. Piece_5 Actual	No. Piece_6 Actual			
32	83.600	+0.500/-0.500	83.571	83.574			
33	0.864	+0.010/-0.010	0.865	0.865			
34	1.358	+0.005/-0.005	1.359	1.359			
35	5.200	+0.500/-0.500	5.212	5.226			
36	1.367	+0.005/-0.005	1.368	1.369			
D37	0.188	+0.010/-0.010	0.188	0.188			
38	1.575	+0.010/-0.010	1.573	1.573			
D39	0.120	+0.020/-0.020	0.121	0.122			
D40	1.000	+0.010/-0.010	1.003	1.003			
41	0.500	+0.010/-0.010	0.503	0.503			
42	0.115	+0.010/-0.010	0.116	0.114			
D43	0.235	+0.005/0.000	0.235	0.237			
44	1.605	+0.005/0.000	1.607	1.607			
Ang45	48.000	+0.500/-0.500	47.970	47.922			
D46	0.510	+0.005/0.000	0.512	0.512			

Measured by: GUILLAUME AUCLAIR	DAS 08 9-88
Date: 2015-11-18	

Audited by:	DAS 44 9-89
Date: 15/11/25	